CCB Meeting
Decision Summary

Thurs., January 29, 2004
9:00 a.m.
Rockledge 1
Fifth Floor Conference Room

Requests Covered

	Submitted By	Area Affected	Type of Request	User Impact	Document Title
01	Lee Brewer	Development and Production clusters Test Database	Change of kernel network configuration of cluster members	High	CCB_1_29_2004_item1
02	Lee Brewer	Development and Production clusters Test Database	Change of kernel network configuration of cluster members	High	CCB_1_29_2004_item2

Request & Decision Summary

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01	Lee Brewer	Development and Production clusters Test Database	Change of kernel network configuration of cluster members	High	CCB_1_29_2004_item1

Request:
During a database fail-over in the production cluster the project experienced noticeable performance degradation. After examination of the performance data it was noted that network performance on the server was the bottleneck. In particular the resource allocated to network buffering is too little when both production databases are running on one server. During normal operations the buffering is adequate. To ensure consistent operations, operations suggest the following kernel parameters changes.

Subsystem	parameter	current dev value	current prod value	proposed value
inet	tcbhashsize	512	512	16384
inet	tcbhasnum	16	1	16
socket	somaxconn	1024	1024	65535
socket	sominconn	0	0	65535
inet	ipqs	16	1	16
inet	ipqmaxlen	1024	1024	2048
net	ifqmaxlen	1024	1024	2048

The first values tcbhashsize, tcbhashnum, and ipqs regulate the number and size of the hash table used to look up tcp buffers. According to HP documentation the propose values are for a system with web server and/or large database activity. Somaxconn and sominconn regulate the way that sockets receive and buffer incoming and outgoing packets. The idea of the proposed values is to set the maximum value match the minimum to the maximum to provide the largest buffer for sockets. We need to evaluate the memory allocation of sockets in development before we implement them in production. Lastly ipmaxlen and ifmaxlen need boosting if a noticeable number of packets are dropped due to lack of resources. In our cases there was a noticeable number.

Decision: Approved (Development – 2/7/2004; Production – 2/14/2004)

Action: (Lee Brewer) Provide status of changes in development at next CCB meeting (2/5/2004).

	Submitted By	Area Affected	Type of Request	User Impact	Document Title
02	Lee Brewer	Development and Production clusters Test Database	Change of kernel network configuration of cluster members	High	CCB_1_29_2004_item2

	Request: With the upgrade to Tru64 5.1b operations proposes changing the current approved CCB request for a neTRAIN interface on development and production cluster members to a LAG interface. Production and development cluster members each have one functioning interface per member; thus creating a single point of failure. With the use of a LAG interface we can eliminate the single point of failure and also combine the bandwidth of the two interfaces for performance. This should help alleviate any potential bottlenecks that may occur in fail over condition. If needed we can continue added interface to match future traffic levels **Decision:** Approved (Development – 2/7/2004; Production – 2/14/2004) **Action:** (Lee Brewer) Provide status of changes in development at next CCB meeting (2/5/2004).